

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-8, 11-13, 16-20, 37, 40-41 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to provide support for attaching training symbols corresponding to both the number of the transmit antennas and the number of receiving antennas. For example, figures 10-12, show the transmission of training symbols but fail to provide support for the training symbols corresponding to the transmit and receive chains. This matter was added to the claims in an amendment filed 2/23/2009.

Response to Arguments

Applicant's arguments filed 3/26/2010 have been fully considered but they are not persuasive.

In regards to claim 1, the applicant argues that the support for the RTS with attached Nt and Nr symbols, where Nt is the number of antennas or communication chains for transmission and Nr is the number or antennas or communication chains for receptions is found in figures 6 and 7 and paragraphs 66-71 of the US Publication

Art Unit: 2466

20050141459 A1. Furthermore, the applicant refers to method 711 that begins with transmitting a request to transmit and the 1st number of training symbols....method 711 may continue with receiving a clear to transmit response and the second number of training symbols at block 751. The applicant further argues that the number of communication chains may correspond to a number of receive antennas and a number of transmit chains as desired for particular implementation of the method 711.

Paragraph 69 of the specification filed states "it should be noted that any of the numbers of communication chains discussed may correspond to a number of receive chains, **and/or** to a number of transmit chains." It also states "the method 711 may include transmitting a first number of training symbols corresponding to a first number of communication chains". The applicant asserts that paragraph 69 describes the claimed transmission, including N_t and N_r symbols; however paragraph 69 does not provide support for such symbols. Rather, the process of paragraph 69 only generally describes the transmission of a first number of training symbols corresponding to a first number of communication chains and soliciting a response that includes a second number of training symbols corresponding to a second number of communication chains. Paragraph 69 does not disclose that the first number of communication chains include N_t and N_r , i.e. the specification fails to provide any further support for the advantage of transmitting together in an RTS two sets of training symbols where one set corresponds to the number of training symbols for the transmission chains and the second set corresponding to the number of training symbols for the receiving chains. It seems that the processes of figures 6 and 7 describe an RTS being sent with a set of

Art Unit: 2466

training symbols and the CTS being transmitted with a set of training symbols, where the set of training symbols in the RTS or CTS is determined based on the communication chain of the transmitter or receiver, respectively. Thus, the calibration is done by the receiver and then being done by the transmitter.

As such, the Examiner concludes that the specification fails to provide descriptive support for transmitting two sets of training symbols together where one set corresponds to the number of transmitting chains and the other set corresponds to the number of reception chains.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY P. PATEL whose telephone number is (571)272-3086. The examiner can normally be reached on Mon.-Thurs.: 8:00 a.m.- 6:30 p.m..

Art Unit: 2466

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Ryman can be reached on (571)272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. P. P./
Examiner, Art Unit 2466

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2466